

Critical Error, Critical Time

A section of day attack AV-8Bs was on a close air support training mission working with forward air controllers (FACs) on the ground. While inbound to the roll-in point, the FAC requested "flares or a fuel squirt in the dive to help get eyes on."

The lead pilot rolled in but was not cleared "hot" for weapon release because the FAC didn't see him. The wingman rolled in, released two flares, but didn't get cleared, either.

Lead pulled out of his dive and began a climbing right turn to set up for a re-attack—at full throttle, 300 knots, climbing through 14,000 to 15,000 feet, the roll-in altitude. His right hand was on the control stick, left on the throttle. He transmitted, "Here comes a squirt," indicating he would dump a small amount of fuel to mark his position in the sky. With his *Harrier* in a 140-degree right wing down, 30-degree nose-low flight path angle, the pilot was looking out the right side of the cockpit, eyes on the target. He actuated what he believed to be the fuel dump switch.

He suddenly "felt three bangs from the engine compartment with associated thumps in the seat." The wingman saw two puffs of flame with black smoke followed by white smoke trails shooting from the tail.

Lead rolled wings level, pulled the nose up, placed the throttle in idle, selected manual fuel system (MFS) on, noted jet pipe temperature (JPT) 800 degrees (Celsius), then selected throttle off. He radioed, "I got a problem ... get everyone out of the area."

The pilot saw two yellow caution lights illuminated on the left side of the up-front control but was unsure which they were. He figured one must have been the MFS light. He saw no red lights nor did he hear any warnings. He did hear a loud grinding noise in the engine, similar to that when the aircraft's gun is fired.

During an airstart attempt, he observed that "manual fuel was already on." He hit the ignitors and held them down, checking JPT. He asked the wingman to give altitude calls. Unable to get a start, he tried again to no avail. Finally, he abandoned



the aircraft, ejecting at 2,000 feet. The pilot survived, the aircraft was lost.



Grampaw Pettibone says:

Well, stamp on my switches with

barnacle-bottomed boots!

Some of the *Harriers* in this squadron had T-shaped MFS switches, the others—like the one lost here— had "post" types. That shoulda been determined during preflight. But it wasn't. The pilot believed he had a T-handle switch for the MFS. So, with eyes glued on the target, and going by feel, he actuated what he thought was the fuel dump "post-type" switch. Instead, he flipped the post-type MFS switch. He thought he would squirt a shot of gas to help the FAC spot him but got a compressor stall instead. At full throttle in the *Harrier*, selection of MFS can lead to sudden engine overfueling and a compressor stall.

Critical mistake at a critical time.

Gramps knows that marking your spot in the sky in real combat plays into the hands of the bad guys. But this was training and we have to put a premium on safety. Even though the switch shape contributed to the actuation of the wrong system, the

But I flipped
a switch!



Inexact Dilbert

pilot retains the responsibility.

Naval Aviation is a world of details. It's tough payin' attention to all of 'em. But the for the sake of life and limb—and flyin' machines—do so!

Twenty Seconds to Trouble

An RH-53D was approaching a practice minefield 30 miles offshore for an airborne mine countermeasures (AMCM) training exercise. The copilot was at the controls. The helicopter was flying at 100 knots, about 300 feet over the water. Extensive UHF (ultrahigh frequency) communications existed between the helo, the assigned Coast Guard support ship, mobile inshore underwater van and AMCM radar controller throughout the transit. Nearing the intended hover point where the MK 103 gear (used for "sweeping" and cutting deployed mine cables) could be deployed, or "streamed," the pilot advised the crew to "get ready."

The safety observer (SO), starboard rampman (SR) and starboard handler (SH) moved aft and prepared for streaming. The SO informed the pilot and copilot that the crew was in position and requested permission to "control the ramp." The copilot then transferred ramp control aft. The SO subsequently reported, "Ramp level, man on ramp." The copilot acknowledged this transmission. Then the SO told the pilots that the crew was ready to stream.

"The area you're in is a good area to stream," radioed the AMCM radar controller. Believing he heard directions from the pilot or copilot to stream, the SR commenced the operation. The pilot and copilot indicated they did not give this direction. The aircraft was actually heading downwind to a stream point, still at 300 feet, 100 knots. However, both the SO and SR had only the water to use as a reference point, and they believed that the RH-53D was in or nearing a hover.

The SR released a marker float (a 65-pound metal and fiberglass assembly connected to a cable) out over the end of the ramp. The float oscillated about four to six feet aft of the ramp, striking the bird cage assembly (a bar-type device over the ramp). The SO quickly paid out winch cable hoping to control

float oscillations. The oscillations slowed for a moment then increased rapidly when the float approached the tail rotor arc. The SO and SR told the pilots to hover.

The copilot began slowing the aircraft and descended. The SO tried reeling in the float but a pendant jammed in a roller pulley. The float circled over the starboard side of the tail pylon and struck the upper tail rotor arc. The helo experienced moderate to severe vibrations.

The pilot took the controls and increased the rate of descent toward the water, transmitting, "Mayday," and declaring the aircraft was going in the water. The total time elapsed from the radar report, which indicated being in a good area to stream, until the mayday call was 20 seconds.

The helo experienced uncommanded right yaw in the descent. The pilot tried to maintain a level attitude, but the RH-53D impacted the water nose low with near-zero airspeed. It rolled right and sank rapidly.

The pilot and copilot stayed in their seats and sustained no injuries on impact. The SO remained attached to his gunners belt in a crouched position and suffered an ankle sprain.

The SR departed the ramp area during descent and moved forward in the cabin where he sat down on the deck without restraint, subsequently sustaining two cracked vertebrae. The SH's gunners belt was released by the SR, who signaled him forward during descent. The SH laid down on the deck prior to impact and suffered a leg bruise and mild back sprain. All five crew members egressed from underwater successfully—the pilot and copilot through starboard and port pilot jettisonable windows, respectively, the SR and SH through the personnel door, and the SO through the furthest aft port cabin window on a second attempt after getting stuck on the initial try. The crewmen met on the surface, connected lobes of their life preservers, and after 15 minutes in the water were rescued by the Coast Guard ship.



Grampaw Pettibone says:

**Dad blast it! CC took a hike again!
That's CC, as in crew coordination.
NATOPS (Naval Air Training and
Operating Procedures Stand-**

ardization) sez: enter a 50-foot hover BEFORE directing the crew aft to prepare for streaming.

Every time you cut a corner you risk fallin' off the shelf. If that float was a gun, you could say these fellas shot themselves down! All that miscommunicatin' with the many players in this episode directly resulted in the loss of one perfect flyin' machine.

AMCM crews have a tough, grind-it-out mission—from the pilots up front to the aircrewmembers in the back. Flyin' low and slow and deployin' all that gear takes know-how and plenty of practice—and goin' by the numbers, a la NATOPS. Communicatin' is a critical part of the coordination in a complex evolution where equipment is streamed from a helicopter. Fact is, communication is pretty important in ANY airborne evolution where there ain't no net.

Gramps is happy they survived. But it sure weakens these old bones to know that a little miscommunication can cause such a big snafu.

